

CLAIMS:

1. A transmitter for a tire condition monitoring apparatus located in the tire of a vehicle,
said transmitter comprising:
 - a measurement device for measuring the condition of the tire, wherein the
measured condition of the tire includes an internal temperature of the tire;
 - 5 a transmission device for performing wireless communication of data
indicating the condition of the tire measured by the measurement device; and
 - a transmission controller, said transmission controller controls the
transmission device in accordance with an operating mode selected from a normal
mode, in which data transmission is performed a predetermined number of times in a
10 cycle of a predetermined length of time, and a temperature compensation mode, in
which data transmission is performed a number of times greater than said
predetermined number of times in the same cycle, and wherein said transmission
controller determines whether to shift from the current one of the operating modes to
the other operating mode by comparing the measured internal temperature of the tire
15 with a predetermined threshold temperature.
2. The transmitter according to Claim 1, wherein said transmission controller selects the
normal mode when the measured internal temperature of the tire is lower than the
threshold temperature, and said transmission controller selects the temperature
compensation mode when the measured internal temperature of the tire is equal to or
5 higher than the threshold temperature.

3. The transmitter according to Claim 2, wherein the temperature compensation mode includes a first temperature compensation mode and a second temperature compensation mode in which data transmission is performed a number of times greater than the number of times that data transmission is performed in the first temperature compensation mode.
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4. The transmitter according to Claim 1, wherein the threshold temperature comprises a first threshold temperature and a second threshold temperature higher than the first threshold temperature, and said transmission controller selects the first temperature compensation mode when the measured internal temperature of the tire is equal to or higher than the first threshold temperature and lower than the second threshold temperature, and selects the second temperature compensation mode when the measured internal temperature of the tire is equal to or higher than the second threshold temperature.
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5. A transmitter for a tire condition monitoring apparatus located in the tire of a vehicle,
said transmitter comprising:

a measurement device for measuring the condition of the tire, wherein the
measured condition of the tire includes an internal temperature of the tire;

5 a transmission device for performing wireless communication of data
indicating the condition of the tire measured by the measurement device; and

a transmission controller, said transmission controller controls the
transmission device in accordance with an operating mode selected from a normal
mode in which data transmission is performed at first time intervals and a temperature
10 compensation mode in which data transmission is performed at second time intervals
shorter than the first time intervals, and wherein said transmission controller
determines whether to shift from the current one of the operating modes to the other
operating mode by comparing the measured internal temperature of the tire with a
predetermined threshold temperature.

6. The transmitter according to Claim 5, wherein said transmission controller selects the
normal mode when the measured internal temperature of the tire is lower than a
predetermined threshold temperature, said transmission controller selects the
temperature compensation mode when the measured internal temperature of the tire is
5 equal to or higher than the threshold temperature.

7. The transmitter according to Claim 6, wherein the temperature compensation mode includes a first temperature compensation mode and a second temperature compensation mode in which data transmission is performed at third time intervals shorter than the second time intervals in the first temperature compensation mode.
8. The transmitter according to Claim 7, wherein the threshold temperature includes a first threshold temperature and a second threshold temperature higher than the first threshold temperature, and said transmission controller selects the first temperature compensation mode when the measured internal temperature of the tire is equal to or
5 higher than the first threshold temperature and lower than the second threshold temperature, and selects the second temperature compensation mode when the measured internal temperature of the tire is equal to or higher than the second threshold temperature.

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9. A tire condition monitoring apparatus located in a tire of a vehicle, the tire condition monitoring apparatus comprising:

a transmitter, the transmitter including:

5 a measurement device for measuring the condition of the tire, wherein the measured condition of the tire includes an internal temperature of the tire;

a transmission device performing wireless communication of data indicating the condition of the tire measured by the measurement device; and

10 a transmission controller, said transmission controller controls the transmission device in accordance with an operating mode selected from a normal mode, in which data transmission is performed a predetermined number of times in a cycle of a predetermined length of time, and a temperature compensation mode, in which data transmission is performed a number of times greater than said predetermined number of times in the same cycle, and wherein said transmission controller selects the operating mode by comparing the measured internal temperature of the tire with a predetermined threshold temperature; and

15 a receiver which receives data transmitted from said transmitter and which processes the received data.

10. The tire condition monitoring apparatus according to Claim 9, wherein said transmission controller selects the normal mode when the measured internal temperature of the tire is lower than the predetermined threshold temperature, said transmission controller selects the temperature compensation mode when the

- 5 measured internal temperature of the tire is equal to or higher than the threshold
temperature
11. The tire condition monitoring apparatus according to Claim 9, wherein the
temperature compensation mode comprises a first temperature compensation mode
and a second temperature compensation mode in which data transmission is
performed a number of times greater than the number of times that data transmission
5 is performed in the first temperature compensation mode.
12. The tire condition monitoring apparatus according to Claim 10, wherein the threshold
temperature includes a first threshold temperature and a second threshold temperature
higher than the first threshold temperature, and said transmission controller selects the
first temperature compensation mode when the measured internal temperature of the
5 tire is equal to or higher than the first threshold temperature and lower than the second
threshold temperature, and selects the second temperature compensation mode when
the measured internal temperature of the tire is equal to or higher than the second
threshold temperature.
13. The tire condition monitoring apparatus according to Claim 12, wherein the receiver
is connected to a notifying device for providing notification of the condition of the tire.

14. A tire condition monitoring apparatus located in a tire of a vehicle, the tire condition monitoring apparatus comprising:
a transmitter, the transmitter including:
a measurement device for measuring the condition of the tire, wherein the
5 measured condition of the tire includes an internal temperature of the tire;
a transmission device performing wireless communication of data indicating the condition of the tire measured by the measurement device; and
a transmission controller, said transmission controller controls the
transmission device in accordance with an operating mode selected from a normal
10 mode in which data transmission is performed at first time intervals and a temperature compensation mode in which data transmission is performed at second time intervals shorter than the first time intervals, and wherein said transmission controller selects the operating mode by comparing the measured internal temperature of the tire with a predetermined threshold temperature; and
15 a receiver which receives data transmitted from said transmitter and which processes the received data.
15. The tire condition monitoring apparatus according to Claim 14, wherein said transmission controller selects the normal mode when the measured internal temperature of the tire is lower than a predetermined threshold temperature, and selects the temperature compensation mode when the measured internal temperature
5 of the tire is equal to or higher than the threshold temperature.

16. The tire condition monitoring apparatus according to Claim 15, wherein the temperature compensation mode includes a first temperature compensation mode and a second temperature compensation mode in which data transmission is performed at third time intervals shorter than the second time intervals.
17. The tire condition monitoring apparatus according to Claim 16, wherein the threshold temperature includes a first threshold temperature and a second threshold temperature higher than the first threshold temperature, wherein said transmission controller selects the first temperature compensation mode when the measured internal
5 temperature of the tire is equal to or higher than the first threshold temperature and lower than the second threshold temperature, and selects the second temperature compensation mode when the measured internal temperature of the tire is equal to or higher than the second threshold temperature.
18. The tire condition monitoring apparatus according to Claim 14, wherein the receiver is connected to a notifying device for providing notification the condition of the tire.